Emotional Regulation and Anxiety Management in Autism

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Autism Toolkit Series: Life 1st!
Overview

• Core and related features of autism
• Challenges to emotion regulation in autism
• Brief review of essential brain functions
• Emotion regulation and strategies
Core features of Autism Spectrum Disorders

- Delays in, joint attention, social awareness, emotional responsiveness
- Impairments in communication, including language understanding and expression, and/or understanding the social use of language
- Restricted interests and/or repetitive behaviors, rigid adherence to routine and/or structure, obsessive thoughts or pattern of behavior
Areas of Difficulty

- Social
- Pragmatics
- Obsessive Interests
- Black/White Thinking
- Rigidity
- Sensory
- Attention
- Motivation
- Motor
- Executive Functioning
- Emotional Regulation
- Hidden Social Rules
Behavioral Characteristics

- Obsessions/Rituals
- Compulsive Mannerisms
- Self-Stimulatory Behavior
- Refusal
- Withdrawal
- Self-Injury/Abuse
- Aggression
Sensory Processing Difficulties

• Each of us have various sensory systems which process information and assist us in making sense of the world.

• People with autism spectrum disorders have difficulty processing and using sensory input in a meaningful and relevant way.

• Some individuals are over sensitive and others are under sensitive to sensory input.
Sensory Processing Difficulties

- Visual
- Auditory
- Tactile
- Vestibular
- Olfactory
- Gustatory (taste)
- Proprioceptive
Common Stressors at School

- Unstructured times
  - Bus
  - Before/after school
  - Transitions
  - Lunch
  - Physical education

- Sensory
  - Crowds
  - Space
  - Noise

- Academic
  - Understanding what to do & how to do it
  - Breaking down tasks
  - Writing
  - Organization

- Social

- Novel Events

- Changes
Common Stressors at Home

• Sensory
  – food
  – haircuts
  – dentists
  – medical
  – clothing
  – showers

• Completing routines
  – getting ready for school
  – doing homework
  – chores

• Family activities
  – Adjusting “their” agenda/interests with family plans
A Day in The Life

• Poor Nights Sleep
• Favorite Clothes are Dirty
• Out of Favorite Cereal
• Weather has Changed
• No time to play Nintendo
• Bus Late
• Forgot Pokemon Cards
• Teased on Bus
• Substitute Teacher
• Learning Style Ignored
• Social Misperception
• Teacher Says to Tie Shoe

• Poor Nights Sleep

• Starts Day Here
Essential Neuroanatomy for understanding the ASDs

Frontal Lobes
- Involved in planning functions
- Judgement
- Sense of time
- Attention
- Organisation
- Self-regulation

Temporal Lobe
- Auditory, speech & memory centers

Amygdala
- Primitive emotional center

Cerebellum
- Involved in motor skills & shifting attention from one task to another
Autism is a Brain-Based Disorder

- Decreased activity in regions of the frontal lobe during social thinking tasks
  - Implicated in decreased emotional reciprocity
  - Related to problems with attention
- Enlarged Amygdala
  - Likely responsible for intense emotional outbursts
  - Seems to be worse in children with poorer language and social skills
- Enlarged temporal and parietal lobes
  - Related to impairments in language, social understanding, and possibly sensory processing issues
- Overactivity in the Anterior Cingulate cortex
  - May be related to rigid thinking, obsessive thoughts and behavior, emotional flooding (outbursts)
“The primary emotion of Autism is FEAR.”

Temple Grandin
Prefrontal cortex

Medial prefrontal cortex

Ventromedial prefrontal cortex

Amygdala

Brain Structures Involved in Dealing with Fear and Stress
Anxiety and Fear

- Anxiety is a feeling of uneasiness or fear in response to a real or imagined threat.

- Brain scans sensory inputs for threats
  - if threat exists, brain signals body to react
    - Fight, flight, or freeze
  - Conscious control mechanisms engage (under normal circumstances)
    - Behavioral/emotional response to threat is modulated
    - This is a function of memory for past experiences and the ability to quickly assess the current threat in light of those experiences
Overlapping conditions

- Same neuropathology exists in Autism and Anxiety disorders, including:
  - Post Traumatic Stress Disorder
  - Panic Disorder
  - Phobias
  - Obsessive-Compulsive Disorder

- Overactive lymbic system with underactive frontal lobe = emotional dysregulation
  - Anxiety and depression are common
Children, adolescents and adults with ASD experience high levels of anxiety more similar to children with diagnosed anxiety disorders than to non-anxious children.

Kim et al., 2000; Sofronoff & Russell, (2005)

- 84.1% of children with PDD met the full criteria of at least one anxiety disorder:
  - phobia
  - panic disorder
  - separation anxiety disorder
  - avoidant disorder
  - overanxious disorder
  - obsessive compulsive disorder
  - PTSD


Anxiety disorders and depression become more pronounced in late adolescence and early adult life.

Tantam & Prestwood, (1999)

Both ADHD and ASD can lead to self-medication with drugs and alcohol in teens especially if undiagnosed and untreated.
Stress response in ASD

• Research showed increased stress chemicals (cortisol) in ASD individuals
  – Level of cortisol was significantly elevated under stressful conditions
  – Self reports of stress were well below those expected based on cortisol levels
Autism and Alexythymia

• Impaired ability to identify emotional states in both self and others

• ~ 85% of individuals with ASD

• Cognitive empathy remains
  – Individuals with ASD *do not* lack empathy altogether
  – Individuals with ASD may actually be oversensitive to other’s emotions, to the point of feeling overwhelmed by them
  – The overwhelm may be one reason for reduced amount of expressed empathy
Levels of emotional processing

- **Basic level** - processing physiological emotions
  - How the body reacts under fear or stress, etc.
    (increased heart rate, sweating, etc.)

- **Integrative level** based on emotional states
  - How we *interpret* the physiological signals
  - See a snake + heart pounding = fear

- **Logical level**
  - If my face is red and I’m talking loudly I must be angry. Although, if someone else received a gift that I really wanted, I could be jealous.
Emotional processing in typical children

- Children are able to reflect on their experiences and evaluate them based on cultural expectations and social feedback.
- They are able to understand the causes of their emotions and evaluate their significance in relation to self and other.
- Children learn to interpret feeling signals in increasingly complex and subtle ways (e.g., move from ‘angry’ to frustrated, irritated, displeased, disappointed, uncomfortable, etc.).
- This is an intuitive process that occurs without conscious effort in most people.
Emotional processing in ASD

• Requires conscious effort
• Often describe emotions as thoughts or as events
  – What does angry feel like?
    • “It feels like I want to scream.”
  – What does nervous feel like?
    • “I have no idea.” “I guess it feels normal.”
    – “I don’t know what it feels like to be in any humor.”
• Basic emotions are sometimes intact (angry, sad, happy) at the integrative level
• Complex emotions more difficult (pride, embarrassment, shame) and they have difficulty distinguishing these from more basic emotions
• Tend not to describe emotions in terms of personal accounts
• Overemphasize the role of facial expressions
  – I felt said “when tears started to come”, and I was “like frowning and eyebrows like up.”
• May have impaired memory for personal emotional events
  – Possibly related to excessive cortisol and damage to hippocampus
Psychology of emotion

- We learn to put our current emotions in context with our past experiences.
- This creates expectations about future events.
- These expectations guide our behavior and emotional responses when we encounter a similar situation in the future.
- Individuals with autism may have exceptionally narrow expectations resulting in faulty emotional connections in the future.
  - Example – child learns that doctors sometimes cause pain. Can’t distinguish between different types of doctors. Anything resembling a doctor produces fear of pain and intense escape motivated behaviors.
  - Phobia
Other factors affecting emotion regulation

- Sensory oversensitivity
  - May lead to unusual fears (e.g., public bathroom, grocery store, etc.)
  - Always remember the environment!!

- Sleep disorders
  - Sleep quality often affected, even if sleep duration is OK
    - Watch for excessive movement, tooth grinding, breathing difficulties (snoring, breath holding, etc.)

- Seizures
  - ~30-45% of children with ASD have seizures
    - Usually present before age 5 or begin around puberty
    - More likely if – regression in skills, presence of hallucinations
    - More common at lower levels of language, motor, and cognitive functioning

- Pain
  - Misperception that children have high pain threshold
    - May just be a failure to understand pain

- Incomplete or unhealthy diet
Emotional regulation – A social process

- Most of us learn to understand emotion in the context of a social interaction
- We tend to process our emotions in a social context throughout our lives
  - Humans are social beings
  - Individuals with ASD included!
- Those with autism often experience fewer social interactions and higher levels of rejection and bullying
- Many learn to suppress negative emotional expression to avoid rejection, but they don’t fully learn *how to manage* negative feelings.
Emotional regulation – important concepts

• Must learn to regulate both positive and negative emotions
• Proactive approach works best
• Emotion regulation strategies can be either adaptive or maladaptive
• Effective emotion regulation is not automatic for individuals with ASD, it must be taught.
Quote from Philosopher, Chaim Ginott (1971)

“As a teacher (parent, grandparent, clinician), I have come to the frightening conclusion that I am the decisive element in the classroom (home, clinic, etc.). It is my personal approach that creates the climate. It is my daily mood that makes the weather. As a teacher, I possess tremendous power to make a child’s life miserable or joyous. I can be a tool of torture or an instrument of inspiration. I can humiliate or humor, hurt or heal. In all situations, it is my response that decides whether a crisis will be escalated or de-escalated, a child humanized or dehumanized.”
Appropriate Expectations

- When expectations are too high, negative emotion and behavior are likely.
- If person consistently displays negative emotion or behavior, likely need to lower expectations.
- Temporarily lowering expectations to a previous level of success will increase emotional regulation and build positive experiences.
- We draw on positive, success experiences to help us cope with stressful situations.
- Flexibility is key to working with individuals with ASD.
- Do not punish a child for negative emotion or behavior that occur as a result of being overwhelmed, especially if expectations are too high.
  - Note – the reason children with autism vacillate so dramatically in their behavior is because they are over-responsive to stress
  - ANYTHING out of the ordinary can act as a stressor and the child may need extra assistance with emotional regulation under such circumstances
Increase Environmental Supports

• Make the environment as predictable as possible

• Provide consistency
  – Prepare the individual for any unavoidable changes
  – If a change is unavoidable, reduce expectations/demands following the change
Remove/Reduce Stressors

- **Remove/decrease disliked activities**
  - Allow modified participation, or less time required
  - Provide incentive for cooperation and participation

- **Remove/decrease difficult activities**
  - Simplify work
  - Reduce writing assignments
  - Simplify all tasks involving organizing, planning & sequencing
Operate on “Their Time”

- Twice as Much Time, Half as Much Done = A Successful Day

- Plan ahead to avoid rushing, whenever possible.
Balance the Agenda

• Assess the demands for the child when planning the schedule.
• Incorporate a balance of LOW-STRESS, HIGH-PLEASURE activities for the individual.
• Include “stress-free” time in the schedule.
Share the Agenda

- Live Out Loud
- Let the child know the sequence of upcoming events.
- Provide information about time periods.
- Give agenda in visual format.
Simplify Language

- Speak at the person’s level. Avoid confusing language ("fixing to").
- Tell the child specifically what to do.
- Break down tasks into components.
Give checklist for routine tasks. “go clean your room.” Will not likely be sufficient for many. Unmet expectations leads to frustration for parents, teachers, and children.

- make your bed
- put away your clean clothes
- put your books on the shelf
- put your school notebook in your backpack
- put your toys in the toy bin
- sweep the floor
Manage Change of Plans

- Handle changes PROACTIVELY!
- Incorporate “back-up” plans for which you can control the variables.

Cancelled

Field Trip to Science Museum
Provide Reassurance

- The child with ASD NEVER KNOWS WHAT IS COMING NEXT!
- Reassure the child about the sequence of events.
- Utilize “check-ins”
Be Generous with Praise

• Find opportunities to build-up/compliment the person.
Increase Opportunities to Engage in Activities of High Interests and/or Strengths

- Access to preferred peers/adults
- Allow individual work
- Schedule for activities individual enjoys
  - computer
  - reading
  - drawing

- Adreon & Gitlitz, 1998
Listen to the WORDS

• Words convey the meaning for children with ASD.
• Listen to what the child is saying.
• Interpret what the child is saying literally!
• “Probe” for further information
• Encourage clarification
Increase Social Supports

• Utilize Your Community
• Increase Reassurance
• Increase Clarity of Feedback
• Increase Access to People They Like
• Protect from Teasing/Bullying
• Schedule “Support Talk”

- D. Adreon, 1998
Five Steps to Remember to Help Stabilize when Problems Occur

1) Gather information from a number of sources to assess the child’s emotional state.

2) Determine the stressors that exist in the environment.

3) Decrease the stressors by modifying the requirement for disliked and/or difficult tasks and temporarily eliminating any emphasis on teaching new skills (con’t)
4. Make the environment more predictable and increase the use of home base.

5. Balance stressors and learning.
WHAT IS CBT?

Six Components

• Assessment of nature and degree of problem (anxiety, anger, sadness)
• Affective education
• Cognitive restructuring
• Stress management
• Self-reflection
• Schedule of activities/rehearsal

• Developed and refined over several decades
• Research has established CBT as an effective method to change the way a person thinks about and responds to emotions such as anxiety, sadness, anger
• Focuses on aspects of cognitive deficiency in terms of maturity, complexity and expression of emotions
• Cognitive distortion in terms of dysfunctional thinking and incorrect assumptions
CBT Adapted to ASD Cognitive Profile

• Identify key elements of a specific emotion via affective education
• Emotion recognition
• Meaningful measurement of emotion
• Concrete and visual
• Cognitive restructuring
• Gathering evidence, challenging distortions and dysfunctional beliefs
• Practice
• Extending repertoire of responses

CBT and ASD

• Very useful for young people with AS who have impaired ToM abilities
• Difficulty understanding, expressing and managing emotions
• Theoretical model of CBT consistent with current theoretical models of human emotions
• Becoming more consciously aware of one’s emotional state
• Knowing how to respond to emotion
• Becoming more sensitive to how others are feeling

Create an Emotional Toolkit

- **Affective Education**
  - Diary of specific emotions (picture book of the child engaged in variety of experiences)
    - Begin with happiness (can review during periods of distress)
  - Use thermometer, 5-point scale, or other visual to measure intensity of emotion (how happy, sad, angry, etc.)
    - Help them evaluate their emotional intensity realistically
    - This facilitates regulation
  - Increase repertoire of emotions understood (begin with the basic, and then expand to the more complex, gradually)
  - Utilize everyday experiences to teach (label emotions when you see them, empathize, console when necessary)
    - “I understand how frustrating it is when...”
    - “It is disappointing when we don’t get to...”
    - “You seem very excited to go to...”
    - “I wish we could always do everything we want to. Would you like to do X or Y instead?”

Atwood, 2010
Physical activity tools

- Offer quick release of emotional energy
  - Exercise, walk, run, trampoline, swing
  - Sport (basket ball, golf, dance)
  - Creative destruction (shred paper or crush cans into recycling bin)
  - Constructive service (return books to library, help with household or classroom chores)
Relaxation Tools

- Relaxation training
- Music
- Solitude
- Massage
- Swing
- Sleep
- Yoga

Atwood, 2010
Social tools

- Time with family or friend
- Disclosure (music, art, poetry, journaling)
- Seek advice
- Time with a pet
- Affection
  - Intensity, duration, approval
Thoughts and perspective

- Put events in perspective
- Imagine what you would like to do or say
- Being calm is being smart
Special Interests

- Means of relaxation, pleasure, knowledge, success
- Distraction from negative thoughts

- Be careful not to overindulge
  - Special interest can become addictive
    - Especially video games, computer, TV, etc.
Sensory tools

- Sounds. Ear plugs, headphones
- Light. Sunglasses, hat
- Aroma. Deodorant, etc.
- Tactile. Clothing, or fabrics
Medication as a tool

- Treatment of anxiety, depression, obsessions, etc. (SSRI)
- Impulsive, hyperactive, problems with attention or concentration (stimulant or strattera)
  - Note – intense seeking of special interests sometimes appears hyperactive, may actually be obsessive
- Mood cycles (anti-epileptics, mood stabilizers)
  - Having a tantrum/meltdown is not the same as a “mood swing”
  - Could be fatigue, excess stress, sensory overload, etc.
- Sedation (anti-psychotics)
- Start low and go slow
  - Negative response? Consider lower dose.
  - Stimulants can sometimes exacerbate repetitive behaviors and/or mood swings
    - Easy to stop if this occurs
Conclusions

- Autism is a brain-based disorder
- Strong overlap between neuropathology of autism, anxiety, and depression
- Emotion regulation requires external teaching, environmental support, and a range of strategies (creativity)
- Emotion regulation is a lengthy process. Be persistent, have patience and relish every success.